

NORTH AMERICAN PARASITIC FLIES OF THE GENUS *SPATHIDEXIA* WITH DESCRIPTIONS OF TWO NEW SPECIES.

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This paper contains a discussion of the generic characters of the tachinid genus *Spathidexia*, with a key to the species, four in number, of which two are described for the first time. Types of the new species are in my collection.

Townsend erected the genus on internal characters of the female reproductive system, with *clemonsi*, new, as the type and sole species (Jr. N. Y. Ent. Soc., vol. 20, 1912, p. 110); having previously referred to the intended genus under the number TD371 (Ann. Ent. Soc. Amer., vol. 4, 1911, p. 140). In 1916, he published a brief description of the external characters (Ins. Insc. Mens., vol. 4, p. 23). Perhaps the most striking character of the genus is the unusually long backwardly directed larvipositor in the female. The genus is briefly recharacterized below.

Generic characters, from the type species: Eyes bare, descending almost to vibrissae; cheeks very narrow; length of head at antennae much greater than at vibrissae, which are on the oral margin at lower edge of head; front moderately wide in both sexes with two pairs of proclinate orbitals present; ocellars distinct, proclinate; frontal bristles reaching to middle of second antennal segment; antennae inserted a little below middle of eye, elongate reaching nearly to oral margin, third segment three times longer than the second; arista slender, with short basal segments; parafacials bare, greatly narrowed on lower part; facial ridges diverging downward, bearing a few hairs next to vibrissae; palpi well developed; proboscis short, with a fleshy labella. Thoracic chaetotaxy: acrostichal 3, 3; dorsocentral 3, 3; humeral 3 or 4; posthumeral 3; presutural 1 (outer); notopleural 2; intraalar 3; supraalar 3; postalar 2; sternopleural 1, 1; pteropleural 0; scutellum with two marginal, one small discal and a good-sized decussate apical pair; prosternum and propleura bare; postscutellum normally developed; infrascapular hairs absent. Abdomen without any discal bristles; female with a long flattened retractile larvipositor, tapering shortly before apex which is not very acute, behind with a shallow median groove and in profile rather distinctly bowed from base to tip. Claws and pulvilli in both sexes shorter than apical tarsal segment. Wing rather short and broad, with ordinary venation; first vein bare, sec-

ond setulose to small cross vein; apical cell open shortly before wing tip; costal spine distinct.

KEY TO SPECIES OF SPATHIDEXIA.

1. Abdominal segments two to four with defined silvery bands on base; parafrontals and pleura pale-haired; mesonotum thickly pollinose 2
 Fourth abdominal segment wholly polished black, the two preceding ones with thin or changeable whitish pollen on basal margin; parafrontals, pleura, and mesonotum blackish, subshining, and clothed with black hairs; legs black, middle tibia with three anterodorsal bristles (Wisconsin and Ohio).
rasilis n. sp.
2. Mesonotal hairs black; parafacials bare 3
 Hairs on mesonotum white; parafacials with fine white hairs extending to lower third; arista slender to base, finely pubescent; first abdominal segment with a pair of median marginals; legs black; third vein of wing setulose almost to middle of last section (Ohio) cerussata n. sp.
3. Arista distinctly short-haired; abdominal pollen bands covering the basal third of segments two to four; tibiae reddish; moderate-sized species 6 to 7.5 mm. (New England, Washington, D. C., Kentucky, and Texas) clemonsi Townsend
 Arista microscopically pubescent; last three abdominal segments silvery on basal fifth to fourth; legs wholly black; small species 4 to 5.5 mm. (Texas, Illinois to New England).
dunningii Coquillett

Spathidexia clemonsi Townsend.

Spathidexia clemonsi Townsend, Jr. N. Y. Ent. Soc., vol. 20, 1912, p. 110; Ins. Insc. Mens., vol. 4, 1916, p. 23.

The principal characters of the species have been mentioned in the generic discussion and the key. The larvipositor is a trifle broader, shorter, and more strongly bowed than in *dunningii*. There are 15 females in my collection taken at College Station, from June to October. I have not seen any specimens of the male sex.

Spathidexia dunningii Coquillett.

Thryptocera dunningii Coquillett, Jr. N. Y. Ent. Soc., vol. 3, 1895, p. 54.

Hypostena dunningii Coquillett, Revis. Tachinid., 1897, p. 60.

A small species closely resembling the genotype; the main distinguishing characters are given in the accompanying key. The female larvipositor is about the same, but less distinctly bowed, approximating the combined length of last two abdominal segments

above, in repose the apical fourth to third projecting beyond tip of abdomen. Male genitalia with rather broad outer forceps, the tips rounded and bowed inward; inner forceps divided and delicate beyond the slightly swollen base; penis simple, thickest shortly before apex; fifth sternite with a shallow V-shaped incision behind thence narrowly divided, the lobes bearing a few short brownish hairs.

A long series of specimens, including both sexes, taken at College Station, Texas, from May to October. The host relationships are not known.

***Spathidexia cerussata*, n. sp.**

Male.—Eyes bare, descending to the vibrissae which are at the oral margin; pollen on face, cheeks, posterior orbits, and front dense, silvery-white with a faint yellow tinge near the vertex; front 0.27 of the head width in the one specimen, barely wider at base of antennae; parafrontals clothed with white hairs which extend thinly downward to lower third of parafacials; median stripe dark, narrow, obscured by pollen in most views; inner verticals and two proclinate orbitals strongly developed; ocellars present, divergent and proclinate; frontals in a single row of four strong bristles interspaced with three smaller ones, the lowermost weak at middle of second antennal segment, upper pair large diverging posteriorly, the next two strong bristles reclinate and decussate; antennae about as long as face, basal segments red, third largely black, convex on front edge, nearly four times the length of second; arista blackish, finely pubescent, hardly thickened on basal part, second segment short; parafacials linear on lower extremity; facial ridges bearing one or two hairs next to vibrissae; proboscis short, fleshy; labella and palpi pale yellow; cheek almost linear; back of head blackish, gray pollinose, with pale hairs which become longer and denser downward.

Thorax black, covered with thick white pollen which is uninterrupted on the mesonotum; the latter and pleura clothed with white hairs; scutellum concolorous with mesonotum but the hairs on disk black. Chaetotaxy as in *clemonsi*; postscutellum black, densely gray pollinose; infrasquamal hairs absent; calypters semitransparent, whitish, inner margin of posterior lobe tinged with yellow.

Abdomen slender, tapering evenly from near base to apex, shining black with dense silvery pollen on basal fourth of segments two to four; no discals present, hairs on entire upper surface depressed; two basal segments each bearing a marginal row of bristles which are depressed between the median suberect pair and the larger ones at the sides; third and fourth segments with a marginal row of eight or ten well developed

bristles; venter with some pale hairs at middle of first segment, the pollen bands of last three segments tapering inward to the median line.

Legs black, fore femora thickly white pollinose and pale-haired on hind side; hind tibia not ciliate, the middle pair with one anterodorsal bristle; claws and pulvilli small.

Wings subhyaline; veins bare except third which is setulose almost to middle of last section; fourth vein with a broad evenly rounded stumpless bend, thence oblique to costa narrowing the apical cell which is open shortly before the exact wing tip; hind cross vein joining the fourth a trifle nearer bend than small cross vein; last section of fifth vein fully one-third the length of the preceding section; epaulets blackish; costal spine distinct.

Length, 7 mm. Female not known.

Described from one specimen, Amherst, Ohio, July, 1933 (H. J. Reinhard).

In general appearance the species is very similar to *clemonsi* and *dunningii*, differing from both in having the mesonotum clothed with white hairs, parafacials bearing a few fine but distinct hairs, first abdominal segment with a pair of median marginals, and the third wing vein setulose far beyond the small cross vein.

Spathidexia rasilis n. sp.

Female.—Front at vertex 0.33 of the head width in one specimen, widening slightly downward; parafrontals black and subshining on upper part with denser gray pollen below the middle, clothed with short black hairs; median stripe dark velvety brown, slightly narrower than one parafrontal; inner verticals stout, curving backward; ocellars not very large, divergent and proclinate; frontals above antennae decussate except the uppermost which is directed outward and backward, the preceding pair distinctly reclinate with the lowermost about at middle of second antennal segment; orbitals two, proclinate; face and cheeks dark with moderately shining gray or almost plumbeous pollen; parafacial bare, greatly narrowed on lower part; facial ridges bearing bristly hairs on lower third; vibrissae at level with front edge of mouth; antennae as long as face, third segment black, about two and one-half times the length of second which is red at apex; arista black, slightly thickened on proximal fifth, microscopically pubescent, middle segment short; palpi yellow, thickened apically; proboscis short; labella fleshy, reddish-yellow; eyes bare; cheeks about one-tenth the eye height; back of head black with thin plumbeous pollen and only a few pale hairs on lower margin.

Thorax black, thinly dusted with gray pollen; mesonotum subshining, showing no defined vittae and clothed with coarse black hairs; scutellum black, subshining, at most faintly pruinose; pleural hairs black. Chaetotaxy as in *clemonsi*; post-scutellum normally developed; infrascumal hairs absent; calypters semitransparent, white.

Abdomen polished black, basal edge of second segment with thin gray pollen, which is thicker on basal third of the following segment and interrupted at the middle when viewed from above, fourth without pollen and wholly shining; hairs on upper surface depressed, no discals; first segment without median marginals; second with a large pair besides some distinct bristles at the sides; third with a marginal row of ten or twelve; fourth bearing a similar row of about eight with some smaller bristles between these and the apex; genitalia with a flattened posteriorly directed larvipositor about as in *clemonsi*.

Legs shining black; middle tibia with two large bristles and one smaller on outer front side; hind tibia with two good-sized bristles on the inner and outer posterior edge, the rest smaller and uneven; claws and pulvilli short.

Wings subhyaline, with a faint yellow tinge along costal margin; bend of fourth vein rounded, without a stump or fold; apical cross vein slightly arcuate; first posterior cell open just before wing tip; first vein bare, third with hairs extending from base almost to small cross vein; hind cross vein reaching the fourth about two-fifths the distance from bend to small cross vein; last section of fifth vein approximately one-third the length of preceding one; costal spine well developed.

Length, 4.5 to 6 mm. Male unknown.

One specimen without collector's label, Madison, Wisconsin, May 31, 1931 (holotype); and one specimen, Amherst, Ohio, July, 1933 (H. J. Reinhard).

Like the genotype, the species has a backwardly protruding larvipositor but differs from this and the rest of the species by having a blacker and more shining general appearance. Additional differences are mentioned in the description and key.